Huawei-OptiX-OSN-3500 Datasheet

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Overview

The Huawei OptiX OSN 3500 is a new-generation optical transmission system developed by Huawei. It adopts a unified switching architecture and can function as an MPLS/MPLS-TP-based packet device or a TDM device. When working with other devices of Huawei, OSN 3500 supports various networking modes, including the pure packet mode, hybrid networking (packet + TDM) mode, and pure TDM mode, achieving optimal processing for packet services and traditional SDH services. Thus, OSN 3500 efficiently transmits voice and data services over the same platform.

Quick Specs

Table 1 shows the Quick Specs.

Product Code	Huawei OptiX OSN 3500
Dimensions	722 mm (H) x 497 mm (W) x 295 mm (D)
Switch capacity	Packet: 160 Gbit/s and TDM: 200 Gbit/s (higher order), 20 Gbit/s (lower order)
Service slots	15 slots for processing boards and 16 slots for interface boards
Power Supply	-48V DC/ -60V DC; 110/220V AC (External module)

Product Details

HUAWEI OPTIX OSN 3500 provides these features:

• **All in One Solution Based on Universal Switch and Transport**

- Unique architecture that integrates PCM, TDM, Ethernet, WDM and MPLS-TP technology.

- Universal switch at any level of packet and TDM in their original format, high efficiency and best performance, '0' waste of bandwidth.

- Carefree evolution among different types of services, such as from 100% TDM to 100% packet, '0' waste of investment.

• **Enables optimized transport network with Built-in PCM**

- Unified Access: Multiple PCM boards are developed on mature OSN serial MSTP products, realizing unified access for low-speed services.

- High Reliability: Provides direct low-speed service access, minimizing conversion equipment and fault points.

- Easy Maintenance: The NMS U2000 enables unified management, a visual interface, End-to-End (E2E) service configuration, and unified monitoring

• **MPLS-TP for Highly Efficient and Highly Available Packet Transport**

- Guaranteed Performance from end-to-end committed bandwidth mechanism.

- 99.999% availability: 50ms recovery for both linear and ring applications.

- SDH-like OAM mechanism capable of fast detection and troubleshooting, including end-to-end performance monitoring.

• **40G Ultra Broadband Transport**

- Integrating OTU, MUX and DEMUX boards by a PID (photonics integrated device) chip, providing 40G capacity per port.

- Without complicated photonic layer design such as wavelength planning and OSNR calculating, with less patch cords and fiber operations, time to market greatly reduced.

- 50% footprint saving and 50% power consumption reduction.

• **TP-Assist for Easy O&M**

- MPLS-TP based O&M solution 'TP-Assist' providing efficient planning, fast deployment and easy maintenance, making the largescale packet network easily manageable

- Traffic based crystal clear O&M is supported with visual networklevel view, graphical format to display end-to-end service configuration, performance and status.

- Better maintenance experience even than SDH: visualized end-to-end bandwidth management, intelligently locating 92% failure,

analyzable and predicable network management.

- **Industrial Certifications Ensure Reliable Operation**

- Compliant with EN 50121-4, IEC 61850-3, IEC 61000-6-5, IEEE 1613.

Compare to Similar Items

Table 2 shows the comparison.

Product Code	Huawei OptiX OSN 500	Huawei OptiX OSN 550	Huawei OptiX OSN 580	Huawei OptiX OSN 3500	Huawei OptiX OSN 7500	Huawei OptiX OSN 7500 II
Dimensions	44mm (H) x 442mm (W) x 220mm (D)	88mm (H) x 442mm (W) x 220mm (D)	221 mm (H) x 442 mm (W) x 224 mm (D)	722 mm (H) x 497 mm (W) x 295 mm (D)	757 mm (H) x 497 mm (W) x 295 mm (D)	800mm (H) x 496mm (W) x 295mm (D)
Switch capacity	Packet: 7.2 Gbit/s and TDM: 21.25 Gbit/s (higher order), 5 Gbit/s (lower order)	Packet: 64 Gbit/s ,TDM: 20 Gbit/s (higher order)	Packet: 560 Gbit/s, TDM: 280 Gbit/s (higher order) Packet: 280 Gbit/s, TDM: 280 Gbit/s (higher order)	Packet: 160 Gbit/s and TDM: 200 Gbit/s (higher order), 20 Gbit/s (lower order)	Packet: 160 Gbit/s and TDM: 360 Gbit/s (higher order), 80 Gbit/s (lower order)	Packet: 320 Gbit/s and TDM: 360 Gbit/s (higher order), 40 Gbit/s (lower order), OTN: 560Gbit/s
Service slots	3 slots	8 slots	15 slots	15 slots for processing boards and 16 slots for interface boards	22 slots for processing boards and 8 slots for interface boards	32 slots, 16 slots for interface boards and 16 slots for processing boards with same bandwidth per slot
Power Supply	48V DC/ -60V DC, 220V AC/110V AC	-48 V DC/-60 V DC 220 V AC/110 V AC	-48 V DC/-60 V DC 220 V AC/110 V AC	-48V DC/ -60V DC; 110/220V AC (External module)	-48V DC/-60V DC; 110V AC/220V AC (External module)	-48V DC/-60V DC

View Overview of Huawei Transmission Network Hot Series

Huawei OptiX OSN 1800
Huawei OptiX OSN 500/550/580
Huawei OptiX OSN 8800/6800/3800
Huawei OptiX OSN 9800
Huawei OptiX OSN 7500/7500 II

Get More Information

Do you have any question about the Huawei OptiX OSN 3500?

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Specification

Huawei OptiX OSN 3500 Specification		
Dimensions		722 mm (H) x 497 mm (W) x 295 mm (D)
Switch capacity		Packet: 160 Gbit/s and TDM: 200 Gbit/s (higher order), 20 Gbit/s (lower order)
Service slots		15 slots for processing boards and 16 slots for interface boards
Supported interfaces	OTN interface	OTU-3(40G, compliant with OTL3.4 standard)
	Ethernet interface	FE/GE/10GE
	SDH interface	STM-1/4/16/64

	PDH interface	E1/E3/E4/T1/T3
	ATM interface	E1, STM-1
	WDM interface	40-channel DWDM interfaces, compliant with ITU-T G.694.1 8-channel CWDM interfaces, compliant with ITU-T G.694.2
	PCM interface	FXS/FXO, 2/4 wire audio and E&M X.21/V.35/V.11/V.24/V.28, RS232/RS422, RS449/RS423A/RS422A, RS530/RS530A, RS485, G.703 64 kbit/s codirectional; IEEE C37.94
	Other interface	DDN, SAN, Video
Networking Mode		Supporting pure packet, hybrid (packet + SDH) or SDH networking Supporting WDM networking Supporting single-fiber bidirectional transmission
Power Supply		-48V DC/ -60V DC; 110/220V AC (External module)
Operation Environment	**Temperature**	Long term: -0ºC ~ 45ºC Short term: -5ºC ~ 55ºC
	Relative Humidity	Long term: 5% ~ 85% Short term: 5% ~ 95%
Ethernet Feature		E-Line and E-LAN, QinQ MPLS-TP based VPWS and VPLS Multi-section pseudo-wire (MS-PW) ETH PWE3, TDM PWE3, ATM/IMA PWE3 IGMP Snooping V2 Blacklist, Broadcast packet suppression, ACL VLAN SWAP
PCM features		Voice or data Conference/Meeting, P2MP, MP2MP FXO/FXS mode can be set by software E&M Interface voltage can be set by software (-48V/-12V) E&M signaling can be set by software (Bell types I, II, III, IV, V and British Telecom SSDC5)
QoS		Hierarchical QoS scheduling and traffic shaping DiffServ mode based on traffic classification, eight priority queues Simple traffic classification, complex traffic classification, per hop behavior (PHB),and ACL Committed access rate (CAR), shaping based on port scheduling priority PQ scheduling priority, weighted fair queuing (WFQ) and PQ+WFQ queuing Tail drop and weighted random early detection (WRED)
OAM	**MPLS-TP OAM**	LSP/PW OAM: CC, LB, LT AIS, RDI LM, DM LCK, TST CSF
	MPLS OAM	LSP/PW OAM:FDI, BDI, CV, FFD, TraceRoute, Ping, LM, DM PW OAM: CES PW VCCV
	Ethernet OAM	ETH-CC, ETH-Loopback, ETH-Link Trace, Remote Loopback, Remote Fault Detection, RMON(RFC 2819)
Protection	**Equipment-level Protection**	Cross-connect 1+1 backup, control board 1+1 backup and power 1+1 backup, clock 1+1 backup
	MPLS-TP based Service Protection	LSP/PW Linear protection, Ring protection Anti multifailure protection based on MS-PW LAG, MC-LAG, Dual-homing protection, LPT
	SDH based Service Protection	2/4 fiber MS-SP Ring; 1+1/1:n (n<=14) Linear MSP SNCP/SNCMP/SNCTP 1:N tributary protection for E1/T1, E3/T3, E4, STM-1(e) and FE

	ASON	Distributed restorable rerouting protection 5-level service dedicated protection scheme based on different SLA: Diamond, Gold, Silver, Copper and Iron services Based on VC-4 and VC-12 granularity
Synchronization		Both Ethernet and SDH networks supporting clock synchronization Supporting G.813, Synchronous Ethernet and IEEE 1588v2 synchronization Adaptive clock recovery (ACR) Two external clock inputs/outputs (2 MHz or 2 Mbit/s) Two external time signals(1pps+TOD)

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● Email: sales@router-switch.com